



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,654	09/08/2003	Guo-Qiang Wang	16074ROUS01U	2841
34645	7590	11/08/2007	EXAMINER	
JOHN C. GORECKI, ESQ.			PHAM, BRENDA H	
P.O BOX 553			ART UNIT	PAPER NUMBER
CARLISLE, MA 01741			2616	
			NOTIFICATION DATE	DELIVERY MODE
			11/08/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

john@gorecki.us

Office Action Summary

Application No.

10/657,654

Applicant(s)

WANG, GUO-QUIANG

Examiner

Brenda Pham

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09/10/07.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 22-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 09/08/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 22-38 are newly added. Claims 1-21 are canceled.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 31 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 31 is depending upon canceled claim 11. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 22-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Narvaez et al (US 7,164,860 B1).

Regarding claims 22 and 24, Applicant's admitted prior art (Figure 2) teaches a network device, comprising:

Art Unit: 2616

a first plurality of line interface units (LIU 22) interfaced with a first plurality of subscriber premises equipment over a first type of physical medium, said first type of physical medium comprising a combination of a first type of metallic link and a first physical layer protocol (Physical Mediums xDSL, T1/E1, T3/E3, cable), said first plurality of line interface outputting first signals received via the first type of physical medium;

a first framer (Framer 24) associated with the first plurality of line interface units (LIU 22) and specific to the first type of physical medium, said first framer (24) receiving the first signals output from the first plurality of line interface units and reconstructing first frames formatted according to the first physical layer protocol.

a second plurality of line interface units (LIU 22) interfaced with a second plurality of subscribers equipment (Subscriber Premises Equipment 10) over a second type of physical medium (Physical Mediums xDSL, T1/E1, T3/E3, cable), said second type of physical medium comprising a combination of a second type of metallic link and a second physical layer protocol, said second plurality of line interface outputting second signals received via the second type of physical medium;

a second framer (any of xDSL, T1/E1, T3/E3 or Cable) associated with the second plurality of line interface units (any of xDSL LIU, T1/E1 LIU, T3/E3 LIU, cable) and specific to the second type of physical medium, said second framer (any of Framer 24) receiving the second signals output from the second plurality of line interface units and reconstructing second frames formatted according to the second physical layer protocol

Applicant's admitted prior art does not disclose a first universal frame mapper and a second universal mapper associated with the first framer and second framer, respectively

Narvaez et al in the same field of endeavor, teach a universal frame mapper (a line card 530, such as GFP Framer, HDLC Framer, ATM Framer, see Figure 7A), which are capable of communicating with a number of different network interfaces and protocols.

It would have been obvious to those having ordinary skilled in the art at the time of the invention was made to implement the first and second universal frame mapper, such as that teach by Narvaez, to provide a common line card design for different protocol services.

Regarding claims 23, 32 and 35, Narvaez further teaches wherein the first universal frames and the second universal frames are Generic Framing Procedure (GFP) frames (see GFP Framer of figure 7).

Regarding claims 26, 30 and 36, Narvaez further teaches a switch fabric to switch the GFP frames. Narvaez teaches "FIG. 11 depicts a circuit for performing a switching function. The line cards 1010, 1020 are supported in a chassis and then interconnected to the switch fabric 1030. the switch 1030 is capable of routing information from a first line card to another line card. This function can be achieved using a conventional crossbar switch or other switch fabric."

Art Unit: 2616

Regarding claim 27, Narvaez further teaches a third universal framer (GFP Framer of Figure 7A) which function to multiplexing the GFP Frame, HDLC Frame and ATM Frame).

Regarding claims 25 and 28, Although Narvaez does not teach the second universal frames are Generic Framing Procedure (GFP) frames, and wherein the protocol data units are service level protocol data units, it is well known in the art that a Generalized Framing Procedure (GFP) engine that can encapsulate different types of packet input as defined by the GFP standard.

It would have been a design choice to those having ordinary skill in the art at the time to the invention was made to utilize GFP frames in Applicant's admitted prior art in view of Narvaez to encapsulate different protocol packets directly into GFP.

Regarding claim 29, Narvaez further teaches a plurality of service mappers, one service mapper for each type of service level protocol data unit to be handled by the network device, and wherein the service mappers may the service level protocol data units to an optical physical medium for transmission over an optical physical layer protocol via an optical line interface unit (see figure 4B-4C).

Regarding claim 37, Applicant's admitted prior art teach an optical interface to output the GFP frames onto an optical network (see Figure 2, 10).

Regarding claim 38, Narvaez further teach a set of GFP service specific mappers to extract service protocol data units from the GFP frames (see figure 7A).

6. Claims 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Narvaez et al (US 7,164,860 B1) further in view of Kamiya et al (US 2002/0083190 A1).

Regarding claims 33-34, as explained in the rejection station of claim 22 (parent claim), Applicant's admitted prior art in view of Narvaez et al discloses all the claim limitations recited in parent claim.

Although Applicant' admitted prior art in view of Narvaez does not teach wherein the core header is configured to contain an indication of the length of the payload, wherein the payload is configured to contain a payload header, and wherein the payload header is configured to contain an indication of the type of protocol data unit contained in the payload, this claimed limitation is well known in the art and is taught by Kamiya et al .

Kamiya et al, in the same field of endeavor, teach a GFP frame (see figure 1 and 2).

It would have been obvious to those having ordinary skill in the art to implement the GFP frame, such as that in claims 33-34.

Allowable Subject Matter

7. Claim 31 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 2616

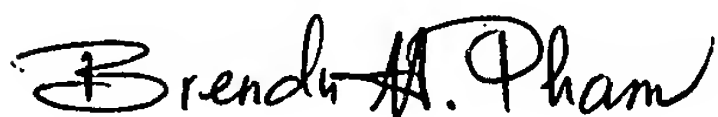
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brenda Pham whose telephone number is (571) 272-3135. The examiner can normally be reached on Monday-Friday from 9:00 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn D. Feild, can be reached on (571) 272-2092.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-2600.

November 2, 2007

Brenda Pham

A handwritten signature in black ink that reads "Brenda A. Pham". The signature is written in a cursive style with a large, stylized "B" and "P".

BRENDA PHAM
PRIMARY EXAMINER